

Amendments to the CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1-18. (Canceled).

19. (Currently Amended) A circuit for converting packets arriving at irregular intervals into a an STM signal in SDH ~~which is a transmission unit in a synchronous digital transmission standard~~, wherein ~~said~~ the circuit is used in a transmission device for transmitting the packets, ~~the said~~ circuit comprising:

~~means for converting a unit configured to perform a buffering process for the packets to convert~~ the packets into a plurality of data streams;

~~means for multiplexing a unit configured to map~~ the data streams into an SDH section payload without adding any overhead for upper layer transmission; and

~~means for generating a unit configured to generate said the STM signal by adding at least one overhead to the multiplexed data streams~~ data of the SDH section payload.

20. (Currently Amended) The circuit as claimed in claim 19, wherein ~~said~~ the packets are IP packets which are used for realizing a communication by the Internet Protocol.

21-23. (Canceled).

24. (Currently Amended) A circuit for converting an STM signal in SDH transmission into packets to be sent at irregular intervals, wherein ~~said~~ the circuit is used in a transmission device for transmitting the packets, ~~said the~~ circuit comprising:

~~means for separating a unit configured to separate at least one overhead which is necessary for said SDH transmission from~~ data of an SDH section payload in ~~said the~~ STM signal;

~~means for generating a unit configured to perform a buffering process for the data of the SDH section payload to generate data streams by demultiplexing data of said STM signal without the overhead; and~~

~~means for extracting a unit configured to extract~~ the packets from the data streams by using at least one data link layer process.

25. (Canceled).

26. (Currently Amended) The transmission device as claimed in claim 24, wherein ~~said the~~ packets are IP packets which are used for realizing a communication by the Internet Protocol.

27. (Currently Amended) A transmission device comprising a first circuit and a second circuit, for transmitting packets by using a transmission unit in a synchronous digital transmission standard, said transmission device comprising: wherein the first circuit converts first packets arriving at irregular intervals into a first STM signal in SDH, and the second circuits converts a second STM signal in SDH, and the second circuits converts a second STM signal in SDH into second packets to be sent at irregular intervals,

a the first circuit comprising:

~~means for converting a unit configured to perform a first buffering process for the first packets to convert the first packets into a plurality of first data streams,~~

~~means for multiplexing a unit configured to map the first data streams into a first SDH section payload without adding any overhead for upper layer transmission,~~

~~means for generating a unit configured to generate a the first STM signal which is the transmission unit by adding at least one overhead to the multiplexed data streams data of the first SDH section payload; and~~

~~means for sending a unit configured to send the first STM signal by said synchronous digital transmission; and~~

a the second circuit comprising:

~~means for separating a unit configured to separate at least one overhead from said signal data of a second SDH section payload in the second STM signal;~~

~~means for generating a unit configured to perform a second buffering process for the data of the second SDH section payload to generate second data streams by demultiplexing data of said signal without the overhead; and~~

~~means for extracting a unit configured to extract the second packets from the second data streams by using at least one data link process.~~

28. (Canceled).

29. (Currently Amended) The transmission device as claimed in claim 27, wherein ~~said~~ the packets are IP packets which are used for realizing a communication by the Internet Protocol.

30.-31. (Canceled).

32. (Currently Amended) A transmission system ~~for transmitting packets by using a transmission unit in a synchronous digital transmission standard, said transmission system comprising:~~ comprising a plurality of transmission devices each of which comprises: a first circuit and a second circuit and a unit for establishing a connection to another transmission device, wherein the first circuit converts first packets arriving at irregular intervals into a first STM signal in SDH, and the second circuits converts a second STM signal in SDH into second packets to be sent at irregular intervals,

a the first circuit including:

~~means for converting~~ a unit configured to perform a first buffering process for the first packets to convert the first packets into a plurality of first data streams;

~~means for multiplexing~~ a unit configured to map the first data streams into a first SDH section payload without adding any overhead for upper layer transmission,

~~means for generating~~ a unit configured to generate a the first STM signal which is the transmission unit by adding at least one overhead to the multiplexed data streams data of the first SDH section payload; and

~~means for sending~~ a unit configured to send the first STM signal by said synchronous digital transmission; and

a the second circuit including:

~~means for separating~~ a unit configured to separate at least one overhead from said signal data of a second SDH section payload in the second STM signal;

~~means for generating~~ a unit configured to perform a second buffering process of the data of the second SDH section payload to generate second data streams by demultiplexing data of said signal without the overhead; and

~~means for extracting~~ a unit configured to extract the second packets from the second data streams by using at least one data link layer process; and

~~means for establishing a connection between said transmission devices by using said signal.~~

33. (Canceled).

34. (Currently Amended) The transmission system as claimed in claim 32, wherein ~~said the~~ packets are IP packets which are used for realizing a communication by the Internet Protocol.

35. (Currently Amended) A method for converting packets arriving at irregular intervals into an STM signal in SDH transmission, wherein said method is used in a transmission device for transmitting the packets, ~~said the~~ method comprising the steps of:
converting performing a buffering process for the packets to convert the
packets into a plurality of data streams ~~by using at least one data link layer process;~~
multiplexing mapping the data streams into an SDH section payload by using
~~at least one interleaving process without adding any overhead for upper layer transmission of~~
~~a VC signal and generating STM data which is a unit of said SDH transmission; and~~
generating ~~said the~~ STM signal by adding at least one overhead ~~which is~~
~~necessary for said SDH transmission to the STM data~~ to data of the SDH section payload.

36. (Currently Amended) A method for converting an STM signal in SDH transmission into packets to be sent at irregular intervals, wherein ~~said the~~ method is used in a transmission device for transmitting the packets, ~~said the~~ method comprising the steps of:
separating at least one overhead ~~which is necessary for said SDH transmission~~
from data of an SDH section payload in said the STM signal;
generating performing a buffering process for the data of the SDH section
payload to generate data streams ~~by demultiplexing data of said STM signal without the~~
~~overhead; and~~
extracting the packets from the data streams by using at least one data link layer process.